

NOVEMBER/DECEMBER 2023

**CMB21/FMB21 — MICROBIAL  
PHYSIOLOGY**

Time : Three hours

Maximum : 75 marks



SECTION A — (10 × 2 = 20 marks)

Answer ALL the questions.

1. Define macro nutrients.
2. Define antiport.
3. What are media?
4. Define pH.
5. Define cryptic growth.
6. What is acidophile?
7. Define enzyme.
8. What is fermentation?
9. Define peptide bond.
10. Define quantum yield.



SECTION B — ( $5 \times 5 = 25$  marks)

Answer ALL the questions.

11. (a) Explain briefly about different nutritional types of microorganisms.

Or

- (b) What is nutrition? Describe the basic nutritional requirements to microorganisms.

12. (a) Give concise note on the isolation of fungi from soil.

Or

- (b) Write notes on streak plate and pour plate methods.

13. (a) Comment on synchronous growth.

Or

- (b) Describe briefly about the various factors influencing microbial growth.

14. (a) Give an account of oxidative phosphorylation.

Or

- (b) Discuss briefly about mixed acid fermentation.

15. (a) What is photophosphorylation? Explain cyclic photophosphorylation.

Or

- (b) Write about the mechanism of peptidoglycan biosynthesis.

SECTION C — ( $3 \times 10 = 30$  marks)

Answer any THREE questions.

16. Write an essay on the mechanism of facilitated diffusion and active transport of nutrients with diagram.

17. Discuss in detail the various mode of preservation of microbial cultures.

18. What is growth? Explain different phases of growth curve.

19. Give an account of ethanol production.

20. Write an essay on bioluminescence.